WHAT IS CLAIMED IS:

1. A coating dry estimating method of estimating a dry state of coating on a coating target, comprising:

a first step of calculating temperature data indicating transition of a temperature distribution of the coating target with time lapse;

a second step of calculating an integrated value of an amount of heat applied to the coating on the basis of the temperature data; and

a third step of estimating the dry state of the coating on the basis of the integrated value of the amount of heat.

2. The coating dry estimating method according to claim 1, wherein the third step contains a step of comparing the integrated value of the amount of heat applied to the coating with a threshold value for judging dry of the coating to estimate the dry state of the coating.

3. The coating dry estimating method according to claim 2, wherein the second step is a step of determining a time period for which the temperature of the coating target is within a predetermined temperature range in the temperature data, and calculating the integrated value of the amount of heat applied to the coating within the time period.

4. The coating dry estimating method according to claim 3, wherein the second step contains a step of correcting the integrated value of the amount of heat on the basis of at least one of the film thickness of the coating, the kind of coating material used for the coating and the content of solvent contained in the coating.

5. The coating dry estimating method according to claim 1, wherein the first step contains a step of superposing a coating target mesh achieved by representing the coating target in the form of a mesh on an in-furnace area mesh achieved by modeling a dry furnace and representing the dry furnace in the form of a mesh while moving the coating target mesh in conformity with a movement pattern representing a movement locus of the coating target, thereby generating superposed grids time-sequentially, and a step of analyzing the temperature distribution of the coating target by using each of the superposed grids generated time-sequentially.

6. The coating dry estimating method according to claim 5, wherein the coating target mesh comprises a fine mesh achieved by representing the internal structure of a member at a note site to be noted for analysis in the form of a mesh, and a rough mesh achieved by representing the surface of the coating target at portions other than the note site in the form of a mesh.

7. The coating dry estimating method according to claim 2, wherein the first step contains a step of superposing a coating target mesh achieved by representing the coating target in the form of a mesh on an in-furnace area mesh achieved by modeling a dry furnace and representing the dry furnace in the form of a mesh while moving the coating target mesh in conformity with a movement pattern representing a movement locus of the coating target, thereby generating superposed grids time-sequentially, and a step of analyzing the temperature distribution of the coating target by using each of the superposed grids generated time-sequentially.

8. The coating dry estimating method according to claim 7, wherein the coating target mesh comprises a fine mesh achieved by representing the internal structure of a member at a note site to be noted for analysis in the form of a mesh, and a rough mesh achieved by representing the surface of the coating target at portions other than the note site in the form of a mesh.

9. The coating dry estimating method according to claim 3, wherein the first step contains a step of superposing a coating target mesh achieved by representing the coating target in the form of a mesh on an in-furnace area mesh achieved by modeling a dry furnace and representing the dry furnace in the form of

a mesh while moving the coating target mesh in conformity with a movement pattern representing a movement locus of the coating target, thereby generating superposed grids time-sequentially, and a step of analyzing the temperature distribution of the coating target by using each of the superposed grids generated time-sequentially.

10. The coating dry estimating method according to claim 9, wherein the coating target mesh comprises a fine mesh achieved by representing the internal structure of a member at a note site to be noted for analysis in the form of a mesh, and a rough mesh achieved by representing the surface of the coating target at portions other than the note site in the form of a mesh.

11. The coating dry estimating method according to claim 4, wherein the first step contains a step of superposing a coating target mesh achieved by representing the coating target in the form of a mesh on an in-furnace area mesh achieved by modeling a dry furnace and representing the dry furnace in the form of a mesh while moving the coating target mesh in conformity with a movement pattern representing a movement locus of the coating target, thereby generating superposed grids time-sequentially, and a step of analyzing the temperature distribution of the coating target by using each of the superposed grids generated time-sequentially.

12. The coating dry estimating method according to claim 11, wherein the coating target mesh comprises a fine mesh achieved by representing the internal structure of a member at a note site to be noted for analysis in the form of a mesh, and a rough mesh achieved by representing the surface of the coating target at portions other than the note site in the form of a mesh.

13. A recording medium recorded with a program for making a computer execute a coating dry estimating method of estimating a dry state of coating on a coated coating target, comprising:

a first step of calculating temperature data indicating transition of a temperature distribution of the coating target with time lapse;

a second step of calculating an integrated value of an amount of heat applied to the coating on the basis of the temperature data; and

a third step of estimating the dry state of the coating on the basis of the integrated value of the amount of heat.

14. A coating dry estimating system for estimating a dry state of coating on a coated coating target, comprising:

a storage device for storing a threshold value for judgment of dry of the coating; and

a computer for calculating temperature data representing

transition of a temperature distribution of the coating target with time lapse, calculating an integrated value of the amount of heat applied to the coating on the basis of the temperature data, and comparing the integrated value of the amount of heat applied to the coating with the threshold value to estimate the dry state of the coating.

15. The coating dry estimating system according to claim 14, wherein the computer calculates a time period for which the temperature of the coating target is within a predetermined temperature range in the temperature data, and calculating an integrated value of the amount of heat applied to the coating within the time period.

16. The coating dry estimating system according to claim 14, wherein the computer corrects the integrated value of the amount of heat on the basis of at least one of the film thickness of the coating, the kind of coating material used for the coating and the content of solvent contained in the coating.